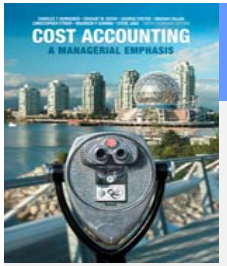
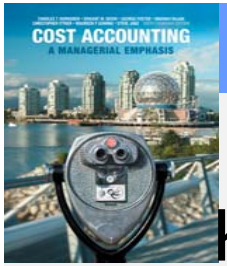


ADM3346_Final Review

2014 Fall



Key points from Ch1-Ch18

- Cost function, esp. regression analysis
- Overhead costs allocation
- Decision making
- ABC
- Process costing
- Spoilage, Rework and Scrap
- Period Costs Allocation
- Joint Costs Allocation and Account for By-product
- Variance Analysis

Cost Accounting: A Managerial Emphasis

Raw Materials

Purchase

DM usage

IDM usage

Factory Payroll

Wages paid

DL usage

IDL usage

MOH

Indirect costs incurred

Allocations

We use FG to Calculate COGS

WIP

DM

DL

MOH

Costs of finished products

We use WIP to calculate COGM

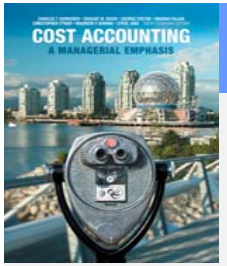
Finished Goods

Costs of finished products

Costs of goods sold

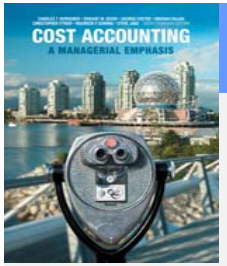
Cost of Goods Sold

Costs of products sold



Spoilage, Rework and Scrap

- Job costing and spoilage
  - ➢ Normal spoilage:
    attribute to a specific job or all jobs
  - ➢ Abnormal spoilage:
    record as loss of abnormal spoilage
- Process costing and spoilage
  including EU of spoilage
- Rework account for



Spoilage, Rework and Scrap

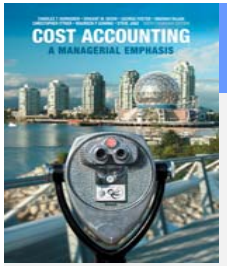
- Concept of EU

- PETCAT steps for preparing cost report

esp.

Equiv units	BI	Comp-lete BI	(good units)	Spoiled unites	EI	WA EU	FIFO EU
DM							
CC							
TI							

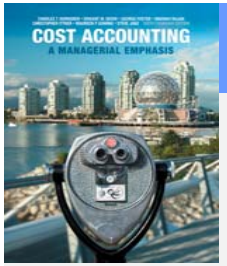
	Process Costing (Common to all production)	Job Costing (Specific job)	Job Costing (Common to all).
Spoilage			
Abnormal	Loss from Abnormal Spoilage Work in Process	Loss from Abn. Sp. WIP	Loss from Abn. Sp WIP
Normal	Finished Goods Work in Process	-No entry (stays in WIP)	MOH Control WIP
Rework			
Abnormal	Loss from Abnormal Rework Materials Control Wages Payable Control Manufacturing OH Allocated	Loss from Abn. Rework Matls. Control Wages Pay. Ctl MOH Alloc.	Loss from Abn. Rework Matls. Control Wages Pay.Ctl. MOH Alloc.
Normal	Manufacturing Overhead Control Materials Control Wages Payable Control Manufacturing OH Allocated	WIP Matls. Control Wages Pay. Ctl. MOH Alloc.	MOH Control Matls. Control Wages Pay.Ctl. MOH Alloc.
Scrap			
At sale	Cash (Accounts Receivable) Manufacturing OH Control	Cash (A/R) WIP	Cash (A/R) MOH Control
At production	Materials Control Manufacturing OH Control	Matls. Control WIP	Matls. Control MOH Control



Q1. The accountant at Cellular Advantage needs to close the books at the end of January, using the following information. Direct materials are added at the start of production. Conversion costs are incurred evenly throughout production. Inspection occurs when production is 75% completed. Normal spoilage is 13,200 units per month.

Physical Units

Work in process, beginning (30% complete)	22,000
Started during the month	148,000
Total units to account for	170,000
Good units completed and transferred out	122,000
Spoiled units	16,000
Work in process, ending (60% complete)	32,000
Total units account for	170,000

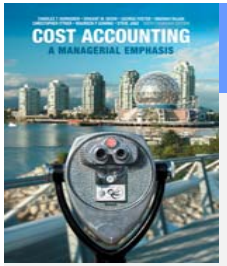


Costs	
Beginning inventory:	
Direct materials	$440,000
Conversion costs	60,000
Total beginning inventory	500,000
Cost added during current period:	
Direct materials	2,960,000
Conversion costs	1,884,000
Total costs to account for	$5,344,000

REQUIRED

1. Prepare a process cost report using the weighted average method.

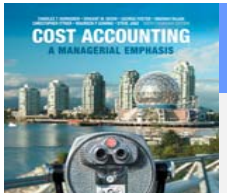
2. Explain why an organization might specify limits for normal spoilage, after which spoilage is considered abnormal.



Period Costs Allocation

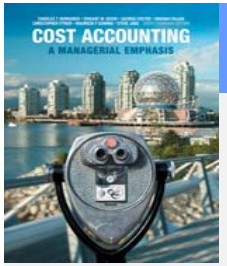
- **Support department costs allocation**
  - direct method: ignore other SDs
  - step-down method: partially allocate to other SDs
    (Decide the order first)
  - reciprocal method: totally allocate to all SDs
    (**Simultaneous Equations**)

- **Single- or dual- rate allocation**



Q2 Phoenix Partners provides management consulting services to government and corporate clients. Phoenix has two support departments – Administrative Services (AS) and Information Systems (IS) – and two operating departments – Government Consulting (Govt.) and Corporate Consulting (Corp.). For the first quarter of 2010, Phoenix's cost records indicate the following:

	Support		Operating		
	AS	**IS**	**Govt.**	**Corp.**	**Total**
Budgeted overhead costs before any interdepartment cost allocations	$600,000	$2,400,000	$8,756,000	$12,452,000	$24,208,000
Support work supplied by AS (budgeted head count)	___	25%	40%	35%	100%
Support work supplied by IS (budgeted computer time)	10%	___	30%	60%	100%



Required:

1 If the step-down method were used to allocate service department costs what would be the order of allocation. Show calculations and explain. **There is no need to do the allocations to user departments.**

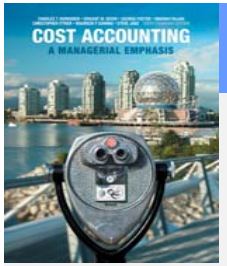
2 If the reciprocal method were used, what would be the total reciprocated cost to be allocated from each service department – **there is no need to provide the allocations**.

3 Explain two advantages of the reciprocal vs other methods of service department cost allocation.

Costs of Joint Products and By-products

- **Costs of Joint product's allocation**

  - Based on physical output: prerequisite-same measure
  - Based on market value
    1) sales value at split point;
    2) NRV: not selling at split point
       NRV= final selling price - separate costs
    3) CGM_NRV: not selling at split point
       same overall GM%



Costs of Joint Products and By-products

- **Sell or process further decision**

  - ? incremental revenue >Separate costs>0

    =(**Final sales value – Sales value at split-off) > Separate costs**

- **By-products costs**

  - **recognized at time of sale: Sales method**

    ignore by-products costs before selling

    no ending-inventory; record other income/or reduce COGS

  - **recognized at time of production: Production method**

    main-product costs are deducted by by-product costs;

    record ending inventory for by-product

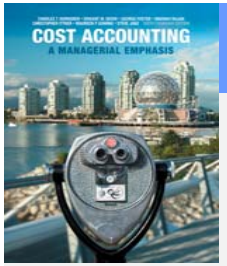
Q3 . Sonimad Sawmill Inc. (SSI) purchases logs from independent timber contractors and processes the logs into three types of lumber products:

- Studs for residential buildings (walls, ceilings)
- Decorative pieces (fireplace mantels, beams for cathedral ceilings)
- Posts used as support braces (mine support braces, braces for exterior fences on ranch properties)

These products are the result of a joint sawmill process that involves removal of bark from the logs, cutting the logs into a workable size, and then cutting the individual products from the logs.

The joint process results in the following costs of products for a typical month:

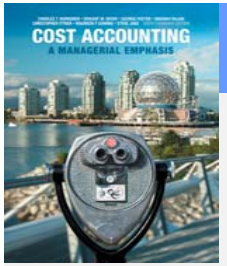
Direct materials (rough timber logs)	$ 500,000
Debarking (labour and overhead)	50,000
Sizing (labour and overhead)	200,000
Product cutting (labour and overhead)	250,000
Total joint costs	$1,000,000



Product yields and average sales values on a per-unit basis from the joint process are as follows:

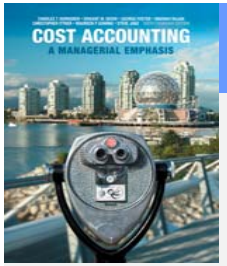
Product	Monthly Output Of Materials at Splitoff Point	Fully Processed Selling Price
Studs	75,000 units	$ 8
Decorative pieces	5,000 units	100
Posts	20,000 units	20

The studs are sold as rough-cut lumber after emerging from the sawmill operation without further processing by SSI. Also, the posts require no further processing beyond the splitoff point. The decorative pieces must be planed and further sized after emerging from the sawmill. This additional processing costs $100,000 per month and normally results in a loss of 10% of the units entering the process. Without this planing and sizing process, there is still an active intermediate market for the unfinished decorative pieces in which the selling price averages $60 per unit.



Required:

1. Prepare an analysis for Sonimad Sawmill that compares processing the decorative pieces further, as they currently do, with selling them as a rough-cut product immediately at split-off.
2. Based on the information given for Sonimad Sawmill, allocate the joint processing costs of $1,000,000 to the three products using NRV method.



Variance Analysis

Level 1

Static-Budget Variance

Level 2

Flexible-Budget Variance

Sales-Volume Variance

Price Variance

Efficiency Variance

Sales-Mix Variance

Sales-quantity Variance

Level 3

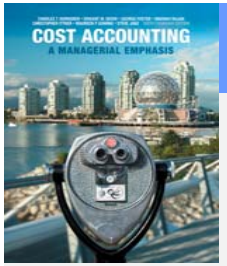
Mix Variance

Yield Variance

Market-Size Variance

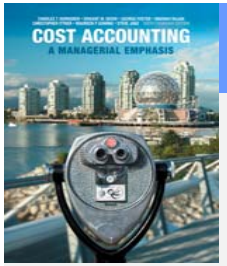
Market-Share Variance

Level 4



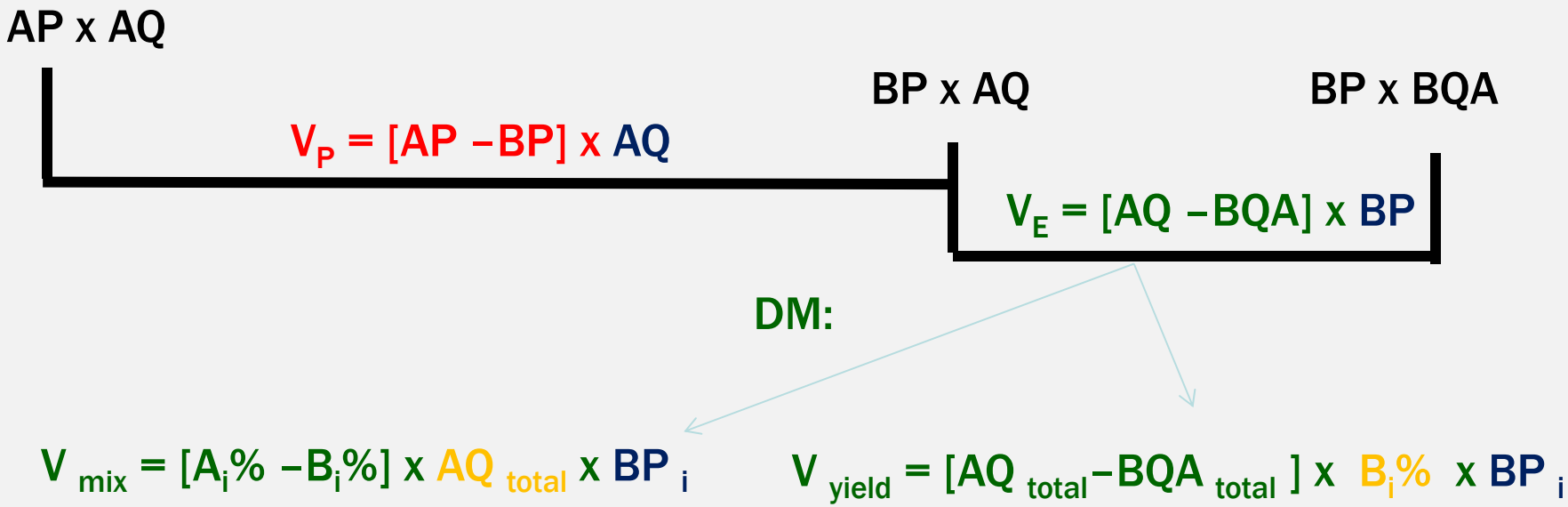
Variance Analysis
Static and Flexible Budgets

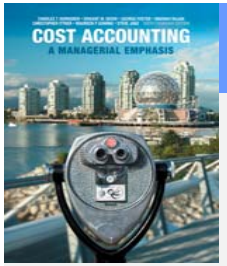
- Operation budgets- Static (Master) budgets & Flexible budgets
- How to make Flexible Budgets?
- ABC and variance analysis



Variance Analysis

- General model of Variable Cost Variances (DL, DM, VOH)





Variance Analysis

- FOH variances are different from the general model

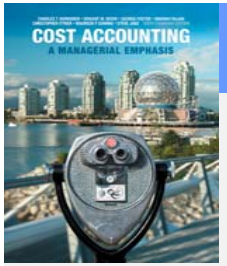
$$V_s = FOH_{actual} - FOH_{estimated}$$

$$V_{pv} = FOH_{estimated} - FOH_{allocated}$$

$$= (BQ_{allocation\ base} - BQA_{allocation\ base}) \times BR$$

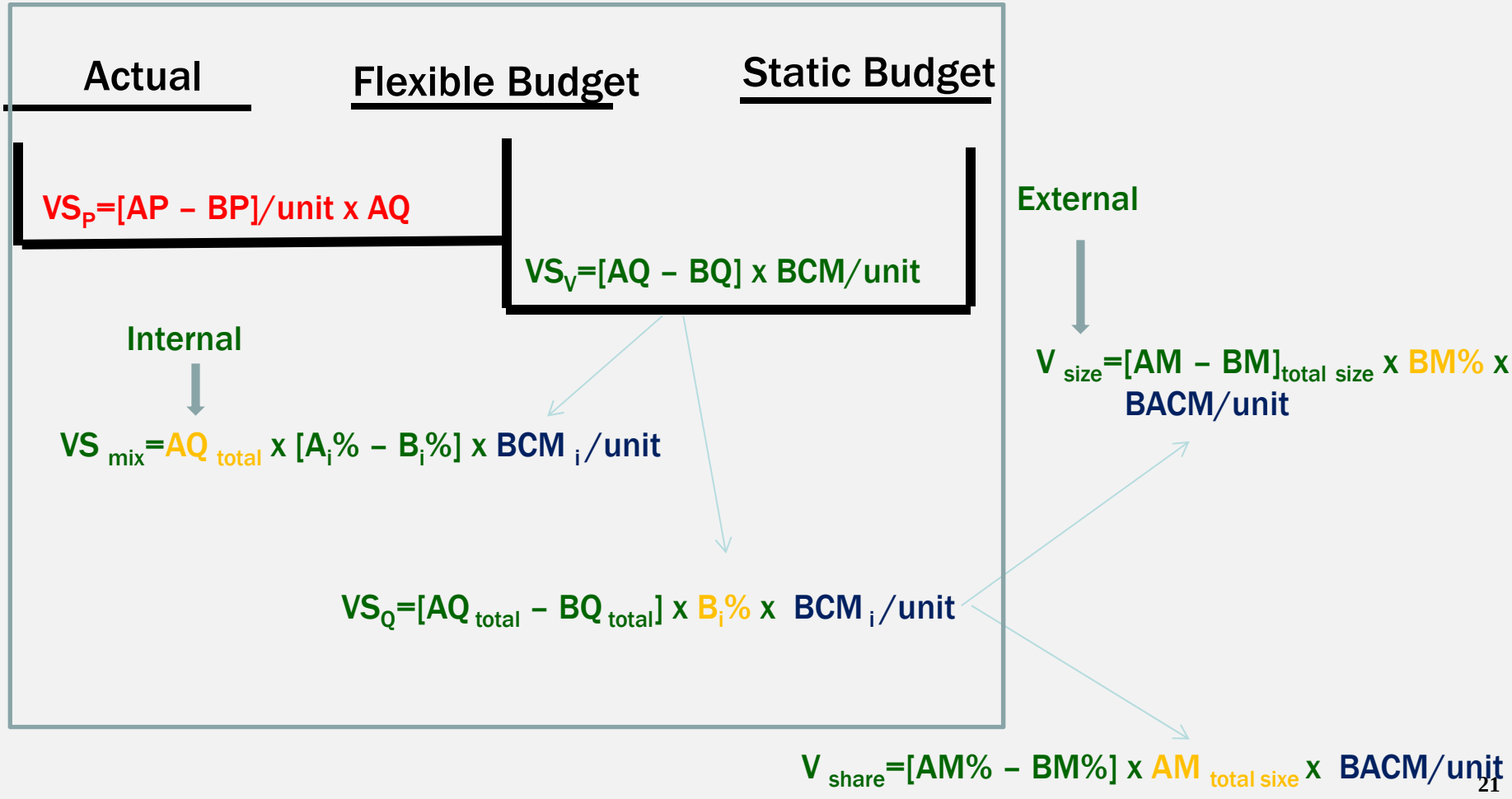
if $BQ_{allocation\ base} > BQA_{allocation\ base}$ Unfavourable

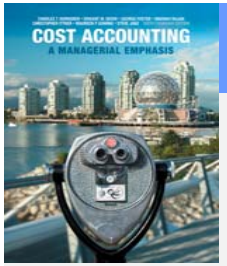
if $BQ_{allocation\ base} < BQA_{allocation\ base}$ Favourable



Variance Analysis

- Profitability-related variance analysis





- Good Luck!
- Happy Holidays!